

Date: Tue, 19 Jan 93 14:10:55 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #79
To: Info-Hams

Info-Hams Digest Tue, 19 Jan 93 Volume 93 : Issue 79

Today's Topics:

Anybody want to talk about Clover?
 CW practice software
 DJ580T DSM question
 HTs at Disneyland
 INDEX INFOHAMS
 Multi-band HF antenna advice?
 Need a 3rd hand for Soldering!?
 QSL info for J33A
 Radio Shack Business Band Radio
 SWR-sampling lines; info required.
 The 220 MHz debacle.
 THE most accurate clock
 Transmitting 50-178 & 300-512?

What kind of license is required to transmit on the 10GHz freq.? (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 19 Jan 93 18:30:58 GMT
From: idacrd!wahoo!n4hy@uunet.uu.net
Subject: Anybody want to talk about Clover?
To: info-hams@ucsd.edu

DE N3EEN:

What is FEC?

FEC stands for forward error correction. It is the planned use of redundancy on the transmit side that allows the receiver to correct for errors induced by channel conditions.

AMTOR is the only amateur mode that has used FEC so far as I know until Clover came along.

BMc

Date: Tue, 19 Jan 1993 19:28:38 GMT
From: swrinde!emory!gatech!paladin.american.edu!howland.reston.ans.net!
zaphod.mps.ohio-state.edu!rpi!jec308.its.rpi.edu!maessm@network.UCSD.EDU
Subject: CW practice software
To: info-hams@ucsd.edu

In article <9301191434.AA17045@deepthought.cs.utexas.edu>, badbunny@tfsp.saic.com
(Brendan Hoar) writes:

|> I'm in the market for some CW practice software. I've passed my No-code
|> technician's license, but since I'm sort of twidling my thumbs here waiting
|> for it, I'd like to spend some time practicing for General.

Look for a program called Supermorse. It is shareware, and is available, among
other places, from the SIMTEL ftp site (SIMTEL20.army.mil).

--
Mat Maessen N2NJZ	maessm@rpi.edu
The opinions expressed in this message definitely do NOT reflect the
views of RPI, Roland Schmitt, or BAPP

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Date: Tue, 19 Jan 1993 19:41:32 GMT
From: dog.ee.lbl.gov!news!avalon.nwc.navy.mil!peewee!erik@network.UCSD.EDU
Subject: DJ580T DSM question
To: info-hams@ucsd.edu

I recently purchased a 580 and I am very happy with it.
I would like to know if it is possible to use the digital signal
message receive capability to display touch tones transmitted
by another station. That is, without the other station sending

any specific DSQ (or even any at all). The idea is to have a crude pager message capability like the new kenwood (which is not crude).

Thanks!

--

Erik van Bronkhorst KC6UUT DoD#4342585443 AMA#[classified]

"Truth is false and logic lost, now the fourth dimension is crossed..."

Date: Tue, 19 Jan 1993 16:30:06 GMT

From: psinntp!panix!oppedahl@uunet.uu.net

Subject: HTs at Disneyland

To: info-hams@ucsd.edu

In <930118151347_76703.3035_CHN93-1@CompuServe.COM> 76703.3035@CompuServe.COM (Steve Silverwood [CA]) writes:

> >Does anyone know if there is any problem with using handytalkies
> >while visiting Disneyland? My XYL and I were thinking of using them to
> >keep track of each other when we go down later this year.
>

>There are no such restrictions. In fact, those of us with the
>Disneyland Amateur Radio Club invite you to make use of the local
>repeater. It's mounted on the roof of one of the towers of the
>Disneyland Hotel on 146.94 (input -600KHz, PL 131.8). Use the repeater
>as needed, or use simplex within the park when possible. Disneyland
>asks that you not use the radios when riding on rides (for obvious
>reasons), and keep the volume down when in the restaurants out of
>courtesy to the other guests.

Anybody have similar information on Disney World?
(In Florida)

--

Carl Oppedahl AA2KW (intellectual property lawyer)

30 Rockefeller Plaza

New York, NY 10112-0228

voice 212-408-2578 fax 212-765-2519

Date: 19 Jan 93 14:32:53 GMT

From: news-mail-gateway@ucsd.edu

Subject: INDEX INFOHAMS

To: info-hams@ucsd.edu

INDEX INFOHAMS

Date: 19 Jan 93 16:51:31 GMT
From: vtserf!GroupW.cns.vt.edu!benchoff@uunet.uu.net
Subject: Multi-band HF antenna advice?
To: info-hams@ucsd.edu

D.RODMAN (oopdavid@ubvmsb.cc.buffalo.edu) wrote:

- In article <11179@vtserf.cc.vt.edu>, benchoff@groupw.cns.vt.edu (Phil Benchoff) writes...

-
- Many amateurs do not know what wind load the tower is rated at: ie,
- is it 18 sq ft at 50 mph or 70 mph or 90 mph. Most municipalities
- adhere to the UBC requirements for such structures. Rating a tower at
It is 70MPH from the manufacturer's specs.

-
- >- Replace the CL-33 with a Mosley TA-53. I am not sure this is all
- > that great of an antenna.

My main hesitation here is that it is 5 bands on a trap antenna. Most people seem to think this is a bad idea.

- >
- >I am interested in your comments on:
- >- Mounting the CL-33 and YB-23 on the same boom. How much effect will
- > they have on each other if they are just 2 or 3 feet apart.

This should say *MAST* not boom.

Thanks for the info. Phil

Date: Tue, 19 Jan 1993 20:08:42 GMT
From: sdd.hp.com!spool.mu.edu!uwm.edu!cs.utexas.edu!convex!constellation!
osuunx.ucc.okstate.edu!datacomm.ucc.okstate.edu!martin@network.UCSD.EDU
Subject: Need a 3rd hand for Soldering!?
To: info-hams@ucsd.edu

I am really glad that I got interested in electronics and radio during the sixties so I can make comparisons between then and now. Electronics has always offered a mixed bag for blind experimenters. The tube-type stuff is easier to navigate by touch, but one always needed to beware of the voltages, inside. Also, one had to really use one's imagination to get around the problem of reading meters and other displays.

The well-equipped ham shack for a blind ham of the sixties or seventies had one or more devices which were,

often-times called, "audio gimmicks." Audio gimmicks are still a good idea, today, but they are a lot easier to build and get working than they used to be. These things were basically voltage-controlled audio oscillators where the controlling voltage was derived from a connection to the meter being read. One fairly common form of audible meter reader which I saw as early as 1964 consisted of a Bud-type chassis box containing a couple of transistors in a multivibrator configuration, a small speaker, battery, and some controls.

The unit always made a buzz when powered up. Besides the power switch, there was another selector switch and a pot whose knob had a pointer which made it possible to read a raised scale under it. A cable went from the box to the meter being read. To take a reading, one moved the selector switch so that voltage from the meter was controlling the oscillator. It was, then, necessary to move the selector switch so that the pitch of the buzz was controlled by the calibrated pot. All you had to do was move the selector back and forth and turn the knob until the pitch was the same for both positions. It was possible, then, to count the raised markings on the scale and see what the meter had been pointing to.

Some fancier gimmicks had a Wheatstone Bridge which balanced when the voltage across the meter was equal to a comparison voltage. The output from the bridge fed the input of a full-wave rectifier bridge so that the output of that bridge showed a DC voltage which dropped to 0 when the Wheatstone Bridge balanced. This output was fed to a VCO so that the pitch of the tone would dip or rise when the null was reached. Finally, there were versions of the gimmick which took the DC output from a Wheatstone Bridge and fed it through a mechanical or, later, an electronic chopper modulator to turn a DC signal into an audio signal. The chopped DC signal was, then, fed to a small amplifier and speaker. When the bridge in this type of setup is unbalanced, a tone is heard. As the calibrated pot is turned, the tone fades to nothing when the null is reached and then reappears when it is passed.

If one needed to know whether a certain signal light was on, the fix was and is a light probe. This is an oscillator circuit in which a photo cell is the R in a RC circuit. The idea is that as light shines on the photo cell, the resistance varies and the timing of the oscillator circuit changes causing a change in pitch. The nice thing is that

light probes are very easy to build and the parts are dirt cheap. I have seen them made from unijunction transistors, discrete bipolars, and NE555 timer IC's connected in an astable multivibrator configuration. When the light is low, the user hears a series of ticks or, maybe, nothing at all. As more light hits the photo cell, the frequency rises like a serene. This gives an indication, not only of the presence of light, but some idea of brightness. Even the cheap lead and cadmium sulphide type photo cells are fast enough to let one hear whether the light is blinking or not. These cells also respond well to visible light and have a tremendous range between their dark reading and saturation.

I don't claim to know all the tricks, but you can see that there are many options for solving problems. I would recommend for any blind ham who is really interested in getting into the hardware aspects of the hobby to learn about computers and digital logic because that's where the action is and where the solutions to many logistical problems lie.

Finally, the future is not all rosy. As equipment becomes more sophisticated and integrated, it is much harder to just modify it to drive a speech synthesizer. I have an old Simpson DMM which I plan to modify to make it talk. The display is easy to reach and is multiplexed so that one would not have to make connections to every segment of the display. Today's devices have their displays integrated into the logic chip which does everything else. This is great for manufacturing, but lousy for tinkering. The only thing to hope for is that CCD cameras and digitizing video boards will get cheaper so as to allow one to actually "read" a display without having to butcher the device in question.

Well, I imagine that many people have hit "N" by now so let's call it a posting, for now.

Martin McCormick WB5AGZ Stillwater, OK
O.S.U. Computer Center Data Communications Group

Date: Tue, 19 Jan 1993 17:09:10 GMT
From: nwnexus!seanews!peterk@uunet.uu.net
Subject: QSL info for J33A
To: info-hams@ucsd.edu

Does anyone have QSL information for J33A? I worked him/her/it during the CQWW CW contest and need a card from Grenada. From the call, it was

probably an "imported" DXer with a temporary permit.

Thanks

Peter Klein, KD7MW

peterk@seanews.akita.com

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--Peter (Peter A. Klein)

peterk@seanews.akita.com

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:  @|    @| @| @|    @|    @|    @|    @|
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Date: Tue, 19 Jan 1993 17:41:27 GMT

From: dog.ee.lbl.gov!overload.lbl.gov!agate!netsys!ukma!news@network.UCSD.EDU

Subject: Radio Shack Business Band Radio

To: info-hams@ucsd.edu

I saw in their catalog that they have a 1 watt business band radio for sale, however it says that you need an FCC certification. I was wondering if anyone knows how to get such certification. Can I modify my Ham Radio to transmit on 152.165 (like the Radio Shack one uses) and then get whatever license I need? How much do these licenses cost?

Thanks for all your help!

John

--

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--+ John S. Roberts, Jr.      FACTS Center  McVey Hall  Room 100  +==
--+ Communications Consultant  Work: (606)257-2275  Home: 272-1417  +==
--+ University of Kentucky    Ham: KD4UBM    DoD: 727    '85 Shadow  +==
--+ Computing Center          HomeUUCP: johnr%agnostic@ms.uky.edu  +==
```

Date: 19 Jan 93 16:46:26 GMT

From: news-mail-gateway@ucsd.edu

Subject: SWR-sampling lines; info required.

To: info-hams@ucsd.edu

I am planning to build a SWR sampling line using copper plumbing fittings; somewhere i remember seeing a statement that the line should be less than about 0.1 wavelength. Since my line will have to operate over something like a 10:1 frequency range, theres a problem: If i make the line long enough to get adequate sensitivity at low frequencies, it will be more than 0.1 wavelength long at the highest frequency.

Question: Is the 0.1 wavelength rule correct? Or am I barking up the

wrong watermelon?

All info gratefully received!

-Pete Lucas G6WBJ pjml%uk.ac.nsw.swmis@nsfnet-relay.ac.uk

Date: Tue, 19 Jan 1993 15:32:52 GMT
From: sdd.hp.com!saimiri.primate.wisc.edu!zaphod.mps.ohio-state.edu!menudo.uh.edu!
uuneo!sugar!jreese@network.UCSD.EDU
Subject: The 220 MHz debacle.
To: info-hams@ucsd.edu

In article <9301182241.AA05114@ucsd.edu>
MUSCHINSKE%39A.DEcnet@scfb.chinalake.navy.mil (39A::MUSCHINSKE) writes:
>
>As if things weren't bad enough! Here is a section from the editorial
>of Don Bishop in the January 1993 issue of Mobile Radio Technology.
>
>.....magazine excerpt deleted
>
>And to think the FCC didn't have a plan when it took away 220-222 MHz ;-(!
>
The whole thing was just a way for the Office of Engineering and Technology
to justify its existence for another year...

--

Jim Reese, WD5IYT	"Real Texans never refer to trouble
jreese@sugar.neosoft.com	as deep doo-doo" --Molly Ivins

Date: 19 Jan 93 17:53:59 GMT
From: news-mail-gateway@ucsd.edu
Subject: THE most accurate clock
To: info-hams@ucsd.edu

>> Last evening I saw a clock that sets itself to WWVB. It is made in
>>Germany by Junghans (Black Forest watch/clock maker). It is tomb-stone
>
>HEATHKIT has had this type of radio for years.
I believe that's what the ***>>>subtle<<<*** subject line was refering to.
But I recall mine only working on WWV. :-). Working is an exaggeration.
It was marginal on my 40 M dipole. I left it disconnected most the time.

The Junghan's Mega had lock inside the store. No external antenna.
73 de Skip, NT1G

Date: Tue, 19 Jan 1993 17:44:20 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!netsys!ukma!news@network.UCSD.EDU
Subject: Transmitting 50-178 & 300-512?
To: info-hams@ucsd.edu

I have this friend who has a radio modified to transmit from 50-178 and 300-512. It is a Kenwood TH78a and I was wondering if he risks damaging his radio by transmitting on these frequencies since the radio is designed for 144-148 and 438-450 transmit and receive. Is the rubber duck suitable for this. He also has a Diamond magmount antenna which he could use with the radio if performance would be better. I was just wondering what type of performance he can expect from his radio and antenna choices.

Thanks,
John

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==+ John S. Roberts, Jr. FACTS Center McVey Hall Room 100 +==
==+ Communications Consultant Work: (606)257-2275 Home: 272-1417 +==
==+ University of Kentucky Ham: KD4UBM DoD: 727 '85 Shadow +==
==+ Computing Center HomeUUCP: johnr%agnostic@ms.uky.edu +==

Date: 19 Jan 93 04:42:36 GMT
From: swrinde!gatech!paladin.american.edu!news.univie.ac.@!hp4at!mcsun!sunic!
lunic!eru.mt.luth.se!enterpoop.mit.edu!ira.uka.de!math.fu-berlin.de!gator!towers!
bluemoon!moonhawk@network.UCSD.EDU
Subject: What kind of license is required to transmit on the 10GHz freq.?
To: info-hams@ucsd.edu

I have been reading up on 'ham' radio, and found diagrams, etc. for a pair of dishes transmitting and receiving on the 10 GHz band. They are capable of 2MBit/s, or up to 10MBit/s with the proper setup. Now, rather than just build them and go off, I would like to keep my legal standing. What class of license is required to broadcast on these bands? I could not find this info in the 1991 ARRL Amateur Radio Handbook. Thanks for any help you can give me! ^^^^^^Amateur :)

David

(- moonhawk@bluemoon.cmhnet.org - dac@dacami.cmhnet.org -)

(- David Culberson - Check out the BMS site at dacami! -)

Date: Tue, 19 Jan 1993 21:23:33 GMT
From: sdd.hp.com!cs.utexas.edu!asuvax!ncar!csn!yuma!gw214790@network.UCSD.EDU
Subject: What kind of license is required to transmit on the 10GHz freq.?
To: info-hams@ucsd.edu

In article <PLXLXB2w165w@bluemoon.use.com> moonhawk@bluemoon.use.com (David Culberson) writes:

>

> I have been reading up on 'ham' radio, and found diagrams, etc. for a
> pair of dishes transmitting and receiving on the 10 GHz band. They are
> capable of 2MBit/s, or up to 10MBit/s with the proper setup. Now, rather
> than just build them and go off, I would like to keep my legal standing.
> What class of license is required to broadcast on these bands? I could

The no code technician license gets you there. 55 questions, no morse code. As an added bonus, you can also get on 2m and 70cm.

Have Fun!!!!!!
Galen Watts, KF0YJ

Date: 19 Jan 93 17:54:58 GMT
From: sdd.hp.com!spool.mu.edu!agate!stanford.edu!CSD-NewsHost.Stanford.EDU!
abercrombie.Stanford.EDU!paulf@network.UCSD.EDU
To: info-hams@ucsd.edu

References <1993Jan15.195852.18698@nntpd2.cxo.dec.com>,
<XJsJXB1w165w@inqmind.bison.mb.ca>,
<1993Jan19.090308.2092@guvax.acc.georgetown.edu>p
Subject : Re: What Amateur Radio books should a library have?

A few suggestions for the Amateur Library:

The Gil Cartoon Book, published by the ARRL.
Funny, and intelligent.

Reference Manual for Telecommunications Engineering, by Freeman.
Very complete, includes all of the stuff in Freeman's RF book,
plus info on landlines and data communication.

RF Circuit Design by Bowick.
So far, the only really good undergraduate level RF design book
I've found.

-=Paul Flaherty, N9FZX | "My boy, we are pilgrims in an unholy land."
->paulf@Stanford.EDU | -- Dr. Henry Jones Sr.

Date: Tue, 19 Jan 1993 17:16:25 GMT
From: swrinde!gatech!emory!wupost!monsanto.com!bb1t.monsanto.com!
sekell@network.UCSD.EDU
To: info-hams@ucsd.edu

References <1993Jan15.181252.13606@pony.Ingres.COM>,
<1jefaeINNING@mirror.digex.com>, <C132qv.Dv4@usenet.ucs.indiana.edu>
Subject : Re: FCC General Radiotelephone license in aviation

In article <C132qv.Dv4@usenet.ucs.indiana.edu>, petri@venus.iucf.indiana.edu
(HOWARD PETRI) writes:
> In article <1jefaeINNING@mirror.digex.com>, stephens@access.digex.com (John
Stephens) writes...
>>In article <1993Jan15.181252.13606@pony.Ingres.COM> kerry@Ingres.COM (Kerry
Kurasaki) writes:
>>....>In article <1993Jan13.213951.24970@Csli.Stanford.EDU>
kawai@csli.stanford.edu (goh kawai - n6uok) writ)
>>....
>>....The General Radiotelephone Permit has all the privileges of the Restricted
>>....Radio Telephone Operator's Permit.
>>
>>A Restricted RTO Permit can be obtained from the FCC for \$35. It
>>is good for life. The application form can be obtained from the
>>FCC, from many FSDOs, and from the AOPA.

Many years ago I picked up a FCC Restricted Radiotelephone Operator Permit
application from a friend that worked at a broadcast FM station. (FCC Form 753)
He told me that was required for a DJ to be on the air. The form was already
several years out of date, but I filled it out and sent it in anyway. There
was no charge indicated. The form was returned to me with the FCC seal and a
grant date. I had neatly typed my name on it and laminated the attached card
when I got it back. I guess I could have filled it out with a crayon and
no one would have cared, but at least it looks quasi-impressive. I just liked
having a license that said I was "authorized to operate any radio station which
may be operated by a person holding this class of license". A finer piece of
federal prose you'll never find. :-)

So just what is this thing good for? I figured it was for marine, aircraft,
and broadcast operators. Do they actually charge \$35 for this now?

Scott Keller +1 314 537 6317 The Agricultural Group of Monsanto

Company
sekell@bb1t.monsanto.com KA0WCH packet: ka0wch@k0pfx.mo.usa.na

Date: Tue, 19 Jan 1993 17:30:49 GMT
From: sdd.hp.com!hpscit.sc.hp.com!hpuerca.atl.hp.com!jab@network.UCSD.EDU
To: info-hams@ucsd.edu

References <1j0ndqINN6p8@clover.csv.warwick.ac.uk>,
<C0sxyF.9F2@srigenprp.sr.hp.com>, <C12qtC.Hv9@hpuerca.atl.hp.com>
Subject : Re: Anybody want to talk about Clover?

Based on email responses, I will clarify a point here, before we all
start quoting theory... :-)

>But I still feel that \$1k/node is going to be a bit much to get mass users
>interested. (Based on general 1200 AX.25, and 56k TCP/IP observations)

>I do feel if this was something with *real* 19200 throughput, off the
>shelf orderable, point to point or star technology, he could sell
>lots of them for \$1k.

I am referring to conventional VHF/UHF/SHF line of site technology,
rather than expecting 19.2 throughput on HF. Without spread spectrum, we
would be dreaming here.

>But \$1k per node to bang through (at low throughput) the HF users (who do
>not want any digital modes anyway) will be a hard sell.

IE: \$1k is more than I suspect the market will bear for HF
throughput/functionality, but I *do* think that if someone had
an off the shelf system that offered 19.2 *throughput* that many would
jump for \$1k. (Hmm... NCR wavelan??? Qualcomm??)

Alan Barrow km4ba | I've seen things you people wouldn't believe. Attack
jab@atl.hp.com | ships on fire off the shoulder of Orion. I watched
| C-beams glitter in the dark near the Tannhauser gate.
..!gatech!kd4nc! | All those moments will be lost in time -
km4ba!alan | like tears in rain. Time to die. Roy Batty

End of Info-Hams Digest V93 #79
